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PUBLIC HEALTH AND THE MEDICAL PRACTITIONER.[1]

By J. H. L. CUMPSTON, M.D., D.P.H.,

Director-General of Health, Commonwealth of Australia.

THE Royal Commission on National Insurance appointed by the Commonwealth Government has just presented its first progress report. This report deals with casual sickness, permanent invalidity, maternity and old age.

It would not be proper for me to discuss this report, except in official memoranda as requested by the Government, but the nature of the recommendations made by the Commission raises some very important practical aspects of the campaign against disease which are so intimately related to the subject which had long before the appearance of the report been chosen for my address today, that it would be appropriate if these were indicated here, without being critically examined.

Within the limits of this paper the general principles only of the Commission's recommendations can be stated.

[1] Read at the Annual Meeting of the North-Eastern Medical Association, New South Wales, at Lismore, on April 25, 1925.

The Commission recommends the establishment of a compulsory system of insurance to provide sickness benefit, maternity benefit, superannuation benefit and child allowance during incapacitation; but the specification of the sections of the community to which compulsion shall apply is postponed to a later report. The benefits under this insurance scheme are limited closely to cash benefits at certain rates actuarially calculated.

At the same time the Commission recommends a "national health scheme" under which provision is to be made for "adequate medical treatment" for the people and which will provide the requisite machinery for the prevention of sickness and accident. The report contains the opinion that medical treatment is not necessarily a subject for insurance and medical benefit is essentially a matter for the Health Department as a part of a national health system as distinct from a national insurance scheme.

The Commission finds that hospital accommodation throughout the Commonwealth could be more effectively and evenly distributed than at present and that in the capital cities it is generally inadequate.

Maternity hospital accommodation is found to be generally inadequate and the establishment of more

maternity hospitals "is very necessary in the interests of women and children, as well as for the training of nurses." The provision of clinics for prenatal and postnatal care, as well as child welfare centres or baby clinics on a scale more extensive than at present, is considered by the Commission to be an important matter.

The Commission deals also with the need for wards for patients with infectious diseases and for intermediate hospitals and also points out the need for greater sanatorium accommodation for the tuberculous.

Concerning laboratory accommodation especially outside the metropolitan areas the Commission records the opinion that "the Commonwealth laboratories have been of very considerable assistance, but the laboratory system in Australia should be considerably extended."

These are matters involving medical care or institutional maintenance or both. The Commission has made no attempt to indicate in practical administrative terms the relationship between the medical practitioners who attend the sick in the community, and the insurance scheme or the Health Department. It is not even clear that any necessary relationship is implied in the scheme as presented. It is difficult, moreover, to discuss this question at all until it is known from later reports which sections of the community are to be compelled to become "insured members."

No profit is to be expected, therefore, from any discussion of these aspects at this stage. There is, however, much advantage to be expected from a preliminary consideration of the other phases of the Commission's report.

Briefly expressed, the Commission has been impressed with the need for a revised conception of the administrative interpretation of the principles of preventive medicine. The practical work of preventive medicine under modern conditions groups itself naturally into three well defined subdivisions. These may be illustrated as follow:

Group I.: Sanitation activities.—These comprise such matters as the provision of safe water supplies, the disposal of human excreta and other organic refuse and the construction of healthy buildings for use either as homes or as work places. This group includes all these conditions of man's environment which may affect his health.

Group II.: Infectious diseases.—This group includes not only the ordinary diseases, such as typhoid and scarlet fevers which are matters of everyday medical routine, but also includes venereal diseases, exotic diseases, such as small pox and plague and the various manifestations of tuberculous infection.

Group III.—The diseases and also the disorders which result from the operation of factors which may be environmental or may be infective or may be something different from either, but which are known and for the prevention of which established methods have been adopted. Such diseases or disorders include the infections or accidents of pregnancy and parturition, the infections and disorders of infant life, of school age or of industrial employment. The conditions included in this group have this in common, that they are in nature numerous and diverse and that the standardized method of attack adopted in each case is identical, being the routine and comprehensive examination of the individual in order to detect any of the possible abnormalities on one or several occasions during the period of observation.

It is appropriate at this point to quote one of the most important findings of the Royal Commission:

> Experience shows it is now essential for the success of preventive medicine that all practising physicians should become actively engaged in the official health campaign. The general practitioner should be co-opted in the scheme to work with the public health authorities, as by such means a great advance should be made in the direction of making preventive medicine an essential part in the practice of medicine generally without affecting the independence of the practitioner.

This is an idea which has been discussed before and at times it is evident that the suggestion has been not correctly interpreted. There is in this proposal no suggestion that the general practitioner shall become a servant or an officer of the Government in any manner or to any degree. The idea is quite simply that, instead of public health being regarded by the profession, as has been the case in the past, as the somewhat uninteresting function of a somewhat lethargic Government department, the profession hereafter shall admit that each medical man in his own practice can adopt and actually does adopt many methods directly intended to prevent the spread of disease. Each medical man in his own practice is actually engaged to a large extent in the practice of preventive medicine. The suggestion now under consideration is that the possibilities of extending this in a systematic way should be explored.

How does it apply in respect of the three groups outlined above?

The group of sanitation activities proves when examined in detail to involve the application of a very variegated and involved series of scientific principles, chemical, physical or biological, and the knowledge necessary for intelligent administration of these sanitary laws and principles is only obtained by a definite and extensive course of post-graduate study. In so far, therefore, as the general practitioner assists within this field, he must be content to assist by carrying out only those functions delegated to him in a definite written code. In the past, irresponsible, although emphatic opinions have been given on matters within this field by practitioners without the experience necessary to an informed judgement and even in so common and familiar an incident as a case of diphtheria, there are many practitioners who retard the education of the public by ascribing the origin of the disease to surface drains, instead of taking swabs from the rest of the family or otherwise endeavouring to trace the human source of infection.

If such an error be still possible within the infectious disease group, which is the practitioner's own sphere, how much more necessary it is that expressions of opinion upon the more involved aspects of environmental influence on health should not be permitted to any except the trained specialist.

Even with this restriction, however, and provided a proper code of instructions is drawn up for the practitioner, it is still possible for him to do much in the course of his ordinary work to assist the officials in their control of these environmental factors, by informing the officials of insanitary conditions of an obvious kind which come under his notice.

Not only would it be unwise to entrust to the general practitioner, at least at the beginning, discretionary authority in respect of these matters, but any attempt by the practitioner to undertake responsibilities in this field would occupy more time than any practitioner can afford. The possibilty of incurring the hostility of the patient would also be an important consideration.

In the second group, that of the infectious diseases, the practitioner can do a great deal more than he is doing by the adoption of routine measures now regarded as the function of the official medical officer of health. Perhaps the most valuable action which every practitioner can perform, is the education of all his parent patients in the practice of invariably isolating every child from other members of the family from the first moment that it shows signs of illness of whatever nature until the illness has been shown to be either non-infectious, when the isolation can be terminated, or infectious, in which case the manner of isolation is adjusted to the specific nature of the illness. Apart from this there would be considerable advantage gained by investing every practitioner with legal authority to order his patients or their guardians to carry out those measures which have been proven to be necessary to prevent the spread of infection, such as disinfection of excreta before removal from the isolation room or sterilization of table utensils used by a diphtheria patient.

The practitioner could also be required as a legal obligation on himself to take every practicable step to discover the source of infection and report it immediately to the official authorities, to take swabs of all house contacts and to submit swabs in the case of diphtheria and urinary and fæcal specimens in typhoid fever before releasing the patient from isolation. In the case of tuberculosis it is a necessary but neglected precaution that every member of the family, especially adolescent children, should be examined from time to time in order to detect the first indications of infection from the primary case.

As a final illustrative example the practitioner should be invested with authority to issue an order, legally valid and enforceable, to the owner of a dairy to cease the sale of milk immediately a diagnosis of certain infectious diseases is made within the dairy premises.

In many ways such as these functions which even now are spasmodically and irregularly discharged by many practitioners, can be systematized and embodied in the routine of a day's practice.

In the third group there are included such modern aspects of public health work as maternal hygiene, child welfare and school hygiene. The technique prescribed in respect of each of these is almost entirely the technique of medical examination and treatment. To a certain extent this is along specialized lines, but there is no reason why these specialized methods should not be the methods used by every practitioner with every patient or person under his care. It will, of course, always be necessary to make provision for the floating and indigent sections of the population, but it should be possible not only to insure the adoption more generally in private practice of such prophylactic efforts as prenatal examinations, scientific feeding of infants and periodic examinations of children during school life, but to arrange that a large volume of these activities now carried on at the public expense should be carried on by the practitioner as part of his private practice, having such association with the official authorities as is necessary in the public interest.

It will be obvious that none of these proposals raises even the suggestion of the surrender by the practitioner of his individuality or his independence; rather in fact they invoke and enlarge both of these.

There is, however, more even than the above in this question of prevention of disease. The science of preventive medicine is concerning itself more and more with the health of the individual and the medical supervision of individuals or of groups of individuals has become recognized as an integral part of the campaign to prevent the inception or the progress of disease.

It was Disraeli who said in that often quoted remark: "The first duty of a statesman is the care of the health of the people." There is no such thing as "public health" apart from the aggregate state of health of each individual in the population. If health in this sense means "health," it means a state of physical normality and, therefore, the practice of preventive medicine includes the adoption of any measure or method which will prevent the occurrence of any state of physical abnormality. This is quite different from the concept of public health in the minds of most people today, which is restricted to clean water supplies, inoffensive methods of nightsoil disposal, smells generally, pure foods and infectious disease. But the wider field indicated in the literal interpretation of the word "health" is rapidly receiving recognition as the official interpretation of "preventive medicine" or "public health" and in visualizing the scope of preventive medicine in practice, one is bound to ask: In what way can one prevent the occurrence of or arrest the progress of any disease or abnormality?

It is a large field; it is a field which cannot even be entered by either the Government or the medical

profession alone. The two must go hand in hand and step by step.

The discussion of possibilities in this wider field of joint activity would lead us farther afield than the limits of today's conference would permit, but it may be permissible, as emphasizing the close future relationship between medical treatment and public health, between the general practitioner and the public health official, to suggest that the time is not far distant when the medical officer of health will have his office (and his laboratory) at the general hospital instead of at the town hall and when the public health officials and the representatives of the practising profession will confer annually and ask themselves what they have jointly achieved during the past year in reducing disease, suffering and death.

In thus expounding to you who are practitioners, what you should do or be made to do, it is reasonable to mention two other considerations.

So far as the practitioner is concerned, it is necessary to state that:

1. He shall not be expected to undertake any duties which are not on the lines of his daily medical work.
2. He shall be adequately paid for all work done.
3. He shall be prepared to accept freely both advice and direction from trained public health officials on matters outside the range of his own experience or within the range of official necessities.
4. He should be prepared to accept discipline in professional matters relating to public health from an official body of his professional colleagues in place of the police court discipline now provided by various statutes.

The second consideration is the responsibility of Government.

If the medical practitioner is required by the Government to discharge this extensive range of duties, it is proper that the Government in turn should provide for the doctors those necessary scientific aids which the doctors cannot themselves supply. These are mainly:

1. Expert advice on questions of hygiene, prevention of infectious diseases, infant and maternal hygiene and hygiene of school life. For this purpose it will be necessary to have experts sufficiently well qualified to command the respect of the profession.
2. Laboratories staffed by medical men specially trained in laboratory technique, which will (i.) supply reliable information as to bacteriological and chemical diagnosis; (ii.) be situated at such centres that all medical men in country districts shall be able to receive reports within a reasonable time; this involves laboratories at the principal country centres.
3. Full information on the latest methods in use in other countries for avoiding strain on the convalescent and for advice as to occupations most suitable for such cases and similar matters.
4. Assistance in respect of transport and hospital accommodation for the sick, accommodation for patients suffering from tuberculosis and related needs.
5. In places where the need exists, the provision of X-ray plants.
6. Assistance in relation to matters of industrial hygiene.

THE ORGANIC FACTOR IN MENTAL DISEASE.[1]

By Clifford Henry, M.B., Ch.M., D.P. (Sydney),
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On inspecting the bookshelves of the present day psychiatrist one cannot fail to be struck by the endless array of works dealing solely with psycho-analysis and psycho-therapy and the relatively small number touching the subject of this paper, the organic factor in mental disease.

We are all familiar with the great advance in our science which has resulted from Freud's doctrines and which has enabled us to investigate and understand psychic problems as such. The new vocabulary which has arisen therefrom, including such terms as "complex," "regression," "sublimation," "displacement," "conversion" and so forth, is of infinite value in describing processes which previously were but vaguely understood and quite uncorrelated, but it appears that the fascinating theories of the subject have been the cause of the neglect of something more tangible and more important—the physical aspect of insanity. Even Freud has said "the edifice of psycho-analytic doctrine which we have erected, is in reality but a superstructure which will have to be set on its organic foundation at some time or other."(1) The great stumbling-block to the acceptance of an organic origin of the psychoses has heretofore been failure to recognize the process by which the psychic mind has evolved from the organic vegetative and sensorimotor systems. Two physiological phenomena supply the key to the problem, facilitation and inhibition.

Facilitation may be described as follows: When a nervous impulse passes along a certain path, the resistance in that particular path is diminished for subsequent similar impulses coming the same way. It is obvious that this process which can be demonstrated experimentally, depends on biochemical changes and not on psychical factors.

Inhibition is a physiological blocking of impulses, either completely or until a certain period of time has elapsed, rendered necessary in the first place to prevent antagonistic muscles acting against each other.

To follow the application of these it is desirable to consider the evolution of the nervous system which is, as it were, a book for those who are able to read it, giving the history of the human animal

[1] Read at a meeting of the Section of Neurology and Psychiatry of the New South Wales Branch of the British Medical Association on April 27, 1925.

from its earliest stages of evolution. The experiences of the past millions of years have moulded and formed it through the agency of the somatic system. As each new need arose in the history of the evolving creature, muscles and organs were formed to meet it and to control these, new nerve tracts and cells evolved in turn. So from its beginning as a means of communication between the ectoderm and the endoderm of primitive organisms it reached the stage when in the higher animals there is some evidence of a degree of intelligence and at least the signs of communication between creatures of the same kind. Consider the condition of the evolving animal just before the dawn of intelligence just mentioned, be it in the man-like ape or the ape-like man or even lower in the scale.

The animal had attained its high level in evolution by constantly doing those things which favoured its own existence and that of its progeny. By facilitation various association systems which were pre-eminently important in this preservation of the species, became superlatively sensitive to the correct stimulus. These association systems grew to form a vast network of short internuncial neurones between the various centres of sensibility which have become the physical storehouses of memory. As an example of this process consider the first efforts at speech. They were no doubt purely unconscious responses to a stimulus during an urgent need of the individual.

The two strongest instincts are those connected with reproduction and self-preservation, so that the earliest efforts at speech were probably purely instinctive, amatory grunts and murmurs and cries of alarm from a fleeing animal. It is easy to picture how by long usage physiological facilitation endowed these sounds with definite meaning and their further progress to a developed vocabulary. The advance from spoken to written speech is no more wonderful and the process forms a useful analogy. As facilitation led to memory, so inhibition led to judgement. In man's evolutionary progress there would often be a period when an immediate response to a stimulus would be disadvantageous to his welfare and so organic inhibition gradually became transmuted into a primitive psychic judgement.

The centuries' old search for the centre of mind has now ended and it has been discovered in a universal cerebral network of psycho-associational neurones, instead of being localized in one spot, formerly believed to have been the frontal lobe. The task of reducing the seemingly abstract to the concrete has been performed. We find mind depending on matter, in other words function on form and an attempt to divorce one from the other is contrary to the accepted teaching of any of the sciences. Professor Berry dogmatically says: "All mental phenomena depend strictly on physical construction and the elementary basis of such construction is always the neurone."[2] Modern psychologists have been forced, perhaps unwillingly, to accept the biological basis of mind and much of their experimental apparatus is either copied from or adapted from that found in a physiological laboratory.

The marvel of today is the commonplace of tomorrow and it has even been questioned whether there exists such a thing as free will. It has been said that a sane man does as his countless fellows do under the direction of his gonads and alimentary glands and when he thinks he is exercising judgement, he is simply acting as the impress of the experiences of his forebears for millions of years on his internuncial neurones direct him to act.

It has been demonstrated how a psychic can have evolved from an organic system, leading to the conclusion that psychic activity demands organic activity. For an "idea" to exist we must have "attention." This implies some physico-chemical change in some part of the brain, a conscious or unconscious directing of energy towards an object and without the existence of an "idea" there can be no mind. Therefore without organic activity there can be no mind. A person with normal ideas is considered sane, whereas one with abnormal ideas is considered to be suffering from a neurosis, psychoneurosis or psychosis. As normal ideas depend on a normal organic state of the nervous system, so abnormal ideas must depend on an abnormal organic state.

As Dr. Nolan Lewis of Washington says:

> To me the chemical reactions of the integrated tissues, the mechanics of the several physical tissue systems and the psychological behaviour of the individual in his relations to society are merely different aspects of the same thing; in short, are activities of the different levels of expression and in disorders of the personality, whether such disorders are expressed mainly at the chemical, physical or psychological (electronic, cellular or symbolic) levels, a corresponding deviation must be present in the other aspects.[3]

This concept is not new, for over two thousand years ago Hippocrates stated that the brain was the organ of mind and that any insane state was a result of a disturbance of this organ. In the dark ages this concept was ignored, but in the last one hundred years the origins of most insane states have one by one been discovered and their organic ætiology made clear. As an example consider general paresis (general paralysis of the insane). Prior to 1820 general paretics were classed either as maniacs or dements, according to their condition. About that time the disease was described as a clinical entity, although its ætiology was not even guessed. Even as late as 1905 Osler conservatively says that "syphilis is antecedent in from 70% to 90% of cases."[4] At the present day, only twenty years later, Jelliffe and White dismiss the question with the terse comment: "no syphilis, no paresis" and include general paralysis of the insane under the general heading of neuro-syphilis.[5] Our attitude towards general paresis has therefore resolved itself into much simpler terms and if similarly we could recognize a definite organic cause for each abnormal mental state, our difficulties would be rendered much less formidable, for a biological conception of mental

disorders links psychiatry with other better established sciences, including medicine and surgery.

In these we find the following conditions: (i.) The ætiology of each organic disease has either been proved or a cause sufficiently logical to be tenable has been assigned to it; (ii.) its diagnosis by approved methods is not difficult and (iii.) treatment consistently successful enough to be universally adopted is usually followed.

In psychiatry conditions are far less ideal, for except in conditions in which an organic cause is readily demonstrable, (i.) every worker has his own theories of causation, (ii.) diagnosis is hampered by the lack of a standard system of classification and (iii.) treatment varies, one could almost say, at the sweet will of the medical attendant.

Any advance which promises to minimize any of these evils is welcome and the theory that purely organic conditions are the determining factors in all abnormal mental states, is offered with the belief that it will be found a help in all these difficulties.

The subject may be discussed from three points of view: (i.) The causation of mental disease, (ii.) diagnosis and (iii.) treatment.

If we are not working on sure and logical grounds in all these three divisions, we cannot expect hopeful results.

Causation.

First as to causation. Apart from academic interest the subject is of vast importance in national economics, for without a clear idea of causation we can have no prevention.

During last year out of 7,596 patients in mental hospitals in New South Wales, of whom 3,617 were under the age of forty, there were apparently 3,616 suffering from manic depressive insanity and 889 from *dementia præcox*.

Under the conditions of hospital care the majority might be expected to live another twenty years or more. At a cost of £60 per patient *per annum* it can be seen what an enormous cost these diseases cause the State.[6]

Is the cause of these diseases physiogenic or psychogenic?

The stress and strain of modern life is increasing daily and psychogenic causes must be inferred to be increasing at the same rate. Prevention of disease consists in removing the cause. If the cause cannot be removed and we have no hope that the mental strain on the average individual will lessen in the future, then there can be no prevention. When, however, the organic cause of these states is discovered, we have hope for the present or potential sufferer and more still for the race in the days when the science of eugenics bears practical results in supervising the marriages of probable phrenopaths.

The question of *dementia præcox* bids fair to rival that of congenital mental deficiency, if not to surpass it in importance. For while the idiot or imbecile marries relatively rarely, the primary dement is actively at work in our midst, marrying and adding to the number with the hereditary taint.

To revert to causation. It is thoroughly in accordance with known facts to assert that, though a psychogenic factor may act like a spark to gunpowder in precipitating a psychosis in a susceptible individual, the real *fons et origo* of the morbid condition is an intracellular biochemical disturbance of the cortical neurones caused perhaps by the toxins of an infection, by a dystrophy of the endocrine system or by an alteration in metabolism of tissues not yet suspected of complicity in the catastrophe. Such alteration of metabolism may be of short duration, so that after a time no trace of it may be found, just as may occur in a catarrh of any organ. Its action may be directly on the cerebral cells themselves by the medium of altered secretions or by acting on other tissues again they in their turn may act on the cerebral cells.

Consider the vast ramifications of the visceral vegetative system in the walls of the intestine alone. A very small alteration of metabolism of the cells of the walls of the intestine could produce abnormal afferent impulses which in their integrated effect on the brain could cause sufficient alteration in sensation to explain many well known delusions, such as a sense of impending dissolution, animals or babies in the abdomen and so forth.

Organic causes having a remote morbid influence on the cerebral cells have been postulated by many. Dr. Cotton, of Trenton,[7] claims to have effected 87% of cures by removing such foci of chronic sepsis as septic teeth, tonsils and colons. Recently Drs. Bostock and North carried out an interesting investigation into the influence of blood pressure without unfortunately arriving at any definite conclusions. The endocrine tissues have given us our most promising field of research without, however, living up to our expectations and at present all we can say is that the answer to the problem is to be found and shows promise of being discovered.

Monrad Krohn, of Christiania, says of the so-called functional nervous disorders: "The only thing we know is that they are as a rule unaccompanied by organic changes so gross that they can be discovered by the means at present at our disposal. Till we find reliable methods of studying the prenissl stages of cell degeneration, we have obviously no right to deny the possibility of organic changes."[8]

Diagnosis.

It is customary at present to classify diseases of the nervous system in three divisions: (i.) The physico-chemical or vegetative systems including mental disease due to the endocrinopathies and so forth; (ii.) the sensori-motor systems, including conditions such as *paralysis agitans*, encephalitis, tumours, neuro-syphilis and so forth; (iii.) the psychical or symbolic systems, consisting of the neuroses, psycho-neuroses and psychoses.

It is accepted by all that mental disease associated with disease of the vegetative and sensori-motor systems is directly due to such disease and further that such psychoses as the infection-exhaustion group and toxic, presenile, senile and arterio-sclerotic psychoses with congenital mental defective conditions have a definite organic causation. Epilepsy has been recently described by Oppenheim

as "a toxico-pathic condition with cerebral manifestations"[9] and it appears certain that *dementia præcox* will shortly be established as having its foundation in some combination of endocrine dystrophy. There remains then a group of diseases for which many authorities whose opinions should be given the profound respect they deserve, are still unable to state that they are satisfied that purely organic conditions are responsible. They are: (i.) actual neuroses, neurasthenia and anxiety neurosis; (ii.) the psycho-neuroses, hysteria, compulsion neurosis and shell shock; (iii.) manic depressive psychoses; (iv.) the paranoia group.

Once it has been even tentatively accepted that these states depend for their causation on an organic condition, our diagnosis for the purposes of classification becomes much simpler. Turning to a standard work, Jelliffe and White's "Diseases of the Nervous System," we find a separate section under the heading "Psychical or Symbolic Systems" dealing with "Psychoses Associated with Organic Diseases," in which the psychosis is accepted as due to the organic condition. If then one form of psychosis can be caused by organic disease of the brain, it would seem illogical to assert that other psychoses are purely psychogenetic.

A classification devoid of the old divisions of physical and psychical would enable us properly to correlate mental disorders.

Treatment.

Unless we know the cause, treatment must be purely empirical and therefore unsatisfactory.

With the view that the so-called functional nervous disorders are purely psychical in nature, treatment must be by psycho-therapy, but no one with much experience in mental hospitals would say that mental treatment has been very successful when applied to this group. I have investigated the mental condition of every female patient in Kenmore Mental Hospital and find that out of 556 patients only 133 were sufficiently accessible to grasp the import of questions and make a reply of any significance. Of these some were imbeciles who naturally would not benefit by psycho-analysis. The value of this treatment lies among the sufferers from the neuroses and psycho-neuroses, but is of little application to the general class of certifiable mental patients. So that in both prevention and treatment the discovery and as a natural sequel the successful treatment of an organic cause must be our great hope.

Turning from psychological, physiological and pathological considerations to the most important subject, the patient himself, we may ask: "What is the cause of this man's insanity?" "Is it organic or is it psychic?" We see one unfortunate patient, a victim of manic depressive insanity, one of *dementia præcox* and one of neurasthenia, while the vast majority of individuals, subjected to exactly the same or more intolerable psychic stresses, retain their sanity. Whatever psychic trauma precipitated the attack, it is not always a lasting condition and once our three patients above are removed from its influence, they should either recover or perhaps merge into a corresponding state. This is far from being the case. The manic depressive patient goes through his periodic alternations, the primary dement exhibits his negativism and the neurasthenic his neurasthenia for years. An abnormal organic condition will explain it at once, while every other explanation fails as quickly.

May I conclude with a few points from actual practice? Consider two patients suffering from acute confusional conditions, one a woman in the puerperal state, one suffering from a condition without known cause. It is a byword that the puerperal patient will probably make a rapid and complete recovery, whereas one hesitates to give a prognosis in the second case. Why? Is it not because one knows that the underlying organic condition will rapidly disappear in the former, whereas one is in the dark with regard to the latter. And yet they exhibit the same delusions, disorientation and depression or excitement. Secondly, why does practically every patient with psychosis and neurosis improve after admission to hospital? Have you some magic touch to heal their souls? Or have you by benefiting their physical state by general hygienic measures removed some of those organic ills which were troubling their bodies and thereby troubling their minds? On questioning many patients I have found that it was a distinct mental shock to them to find on partially recovering that they were in a mental hospital, in fact severe psychic trauma. This might have been expected under the psychogenic theory to have aggravated their condition. On the contrary, they made subsequent rapid recoveries. Thirdly, consider post-influenzal prostration which Jelliffe and White dignify by a place among the psychoses. Its mental manifestations are absolutely paralleled by some cases of neurasthenia; the influenzal mental condition is admittedly caused directly by toxins acting on the cerebral cells, the neurasthenia by what?

Turning for a moment from psychiatry to embryology we see that the fact of the hereditary transmission of mental characteristics is admitted. How is the psychic make-up transmitted if not by the germ plasm, a purely organic pathway?

I confidently anticipate that before many years have passed each disorder will be accredited with a definite biological origin; that the ultimate solution of our problems lies under the microscope of the pathologist and in the test tube of the biochemist; while psycho-analysis will continue to throw more and more light on the abnormal processes and mechanisms of that psychic edifice which has so far been the end result of the physical human organism.

Conclusion.

To those who consider that I have written too dogmatically I would reply that this method has always seemed to me the best way of establishing a properly receptive and sympathetic state in my readers' minds.

To those who frankly disagree with me, let me say that this paper is not written so much for those psychiatrists whose opposing views are probably as firmly crystallized and well founded as my own

appear to me, as for the many in our profession who desire a simple, rational and harmless basis on which to found their ideas on mental diseases. My ideas as set forth here are based on a good many years' close and thoughtful daily observation of mental patients and it has been a source of comfort to me to have some easily-understood and straightforward point of origin from which to approach the many problems presented in such work. The views of the layman on mental disease are as undesirable as they are ridiculous. At present many a family suffers social agony on account of their fear that someone may find out that they have a relative in a mental hospital. It is considered a disgraceful stigma. If then the layman could be educated to consider mental disease as merely an organic disease of the brain, much if not all of this suffering would be avoided.

Among members of our profession, too, there are many who are bewildered by the amazing amount of uncertainty and the number of conflicting views extant on the subject of mental disease. If I have provided them with a clear background against which to view their difficulties, my object will have been more than fulfilled.

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(3) Nolan Lewis: "Relationship of the Aspects of the Personality"; *The Psycho-Analytic Review*, October, 1924, Volume XI., page 405.

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(7) Cotton: "The relation of Chronic Sepsis to the so-called Functional Mental Disorders"; *Journal of Mental Science*, October, 1923, page 434.

(8) Monrad Krohn: "On the Possibility of a Biological Conception of so-called Functional Nervous Disorders"; *Journal of Mental Science*, April, 1921, page 205.

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PRELIMINARY NOTE ON THE OCCURRENCE OF DISTOME CERCERIÆ IN LIMNÆ BRAZIERI (SMITH).

By Burton Bradley, M.B. (Sydney), D.P.H. (London),
Sydney.

In the course of a snail survey of portions of the Monaro district detailed microscopical examination of several varieties of *Limnæ* and *Bullinus* has been undertaken and the purpose of this note is to record the fact that in samples of *Limnæa brazieri* taken during April, 1925, from several peaty creeklets and marshes in high country in the Jinderbine district, *Distome cerceria* was found in approximately 15% of the samples. (Similar findings have since been obtained in the Cooma district.)

In view of the fact that this is the only variety of snail so far discovered in any considerable number in the particular Jinderbine paddocks and as fæcal matter taken from various situations close by revealed numerous fluke ova (*Distomum hepaticum*), it appears likely that the cerceriæ are those of the sheep fluke and that *Limnæa brazieri* is a carrier of the sporocyst, redia and cerceria stage of this. The suggestion that *Limnæa brazieri* may be a transmitter of the sheep fluke, perhaps the principal transmitter in this country, is strengthened by other observations made by me during the course of routine snail examinations.

One of the commonest snails in Monaro district is *Bullinus brazieri* (Smith) and it inhabits for the most part paddocks accessible to fluky sheep. However, in the course of about one hundred and fifty examinations I found only one single damaged cerceria.

There are several other water snails not all of which are yet identifiable and so far I have not found any evidence of distome infection, although many careful individual microscopical examinations have been made.

As far as our researches have gone (and it is admitted, of course, that they are as yet far from complete) the local distribution of *Limnæa brazieri* is consistent with the hypothesis that it is a transmitter of *Distomum hepaticum*, whereas certainly in the case of *Bullinus brazieri* the local distribution is not parallel with fluke infestation in sheep.

I am influenced in publishing this preliminary note by information supplied from the Australian Museum and from other sources that very little has so far been done in regard to the distome carrying capacity of Australian water snails and that it appears so far uncertain as to which snail carries *Distomum hepaticum*. The matter too has a broader general and medical interest in relation to the possibility of spread in human beings of other flukes imported into this country by returned soldiers from various tropical areas.

I would like to thank the Director of the Australian Museum and Mr. Iredale for the information supplied to me in connexion with the classification of the various snails.

In due course Mr. Iredale and I will give detailed descriptions of this and other snails and experiments are in progress with laboratory hatched miricidia from *Distomum hepaticum* ova to determine finally the question of the means of spread of *Distomum hepaticum* in this country.

Reports of Cases.

CRETINISM.[1]

By M. J. Plomley, M.B., Ch.M. (Sydney),
Honorary Physician, Royal Alexandra Hospital for Children, Camperdown, Sydney.

J.S., a female, aged nine years, was admitted to hospital on March 4, 1925, with a history of black motions for three days. There had been no previous illness, but the child had always been small.

[1] Read at a meeting of the New South Wales Branch of the British Medical Association on April 16, 1925.

The patient was a broad, squat, little girl, ninety-five centimetres (thirty-eight inches) high, she was very pale and almost waxy in appearance. The accompanying illustration is taken with a healthy child of the same age for purposes of comparison. The mucous membrane appeared bloodless. The face was large and coarse. The eyelids were puffy and the *alæ nasi* were thick. The nose was flat and broad, the bridge was depressed. The hair was thin and dry. The tongue was large, flabby, moist and coated. The teeth were carious. The fauces were normal. The abdomen was swollen, the skin was dry and rough; no abnormality was palpable. No abnormality could be detected in either the respiratory or circulatory systems. On admission the temperature was normal, the pulse rate 68 and the respiratory rate 24 in the minute. The reflexes were normal. The child's intelligence was below normal. Thyreoid extract was administered in doses of 0.03 gramme (half a grain) increasing to 0.12 gramme (two grains) three times a day. Considerable improvement has taken place up to the present time. The child's temperature is normal and the pulse rate is 108 in the minute; the respiratory rate is 24.

PREGNANCY AFTER REMOVAL OF SIXTEEN FIBRO-MYOMATA.

By A. S. Vallack, M.B., Ch.M. (Sydney),
Honorary Surgeon, Mater Misericordiæ Hospital, North Sydney.

In January, 1922, I was consulted by a woman, twenty-nine years of age. Her complaint was that she had been married for four years and had never become pregnant. The menstrual periods were regular and not excessive. She had consulted another surgeon who had advised hysterectomy.

On examination the uterus was found to contain a number of small, hard fibro-myomata.

I concurred with the opinion that the uterus ought to be removed, but the patient absolutely refused to allow this, because she was extremely anxious not to be deprived of the chance of having a child and she begged me to remove the tumours. I told her that such an operation would be very unlikely to result in a child, but very likely to result in more tumours. As she still wished in spite of this opinion to have the growths removed, I consented to do this on condition that her husband was made fully acquainted with the facts. At operation sixteen fibroids were removed. They varied in size from about five centimetres to about one centimeter in diameter. Some were subserous, but the majority intramural. Naturally the uterus was reduced to a shapeless mass by the operation.

About two years after this the patient wrote to me to inform me that she was pregnant. She was attended in her confinement by Dr. Humphry, of Townsville, to whose courtesy I am indebted for the following facts. Labour lasted twenty-four hours. No instruments were used and a child weighing three kilograms (six and a half pounds) was delivered without laceration of either cervix or perineum. The uterus felt quite normal afterwards and convalescence was uneventful.

The only comment I wish to make is that the patient was right and I was wrong. This is by no means the first time that such a thing has happened to me and not likely to be the last.

Reviews.

PATHOLOGY FOR THE SURGEON.

"Surgical Pathology" by William Boyd, Professor of Pathology of the University of Manitoba, is a recent work which fills a great need.[1] The writer is greatly influenced by the American pathologists, MacCallum and Ewing, and has quoted both freely and is indebted to them for many of his illustrations. He has produced a book which is crammed with references to all modern experimental findings as well as the true morbid anatomy of our ancestors. He has managed to correlate the modern work with much of the older pathology and the book can claim to be the most up to date one of its kind. He rightly insists that pathology is no longer the dry-as-dust study of autopsy material, but a living subject and that the surgeon who has not an accurate knowledge of this subject can never be more than a skilled carpenter. He confines himself to pathology that will be of interest to surgeons. They will find this work an excellent compendium of all common conditions. The chapter on surgical bacteriology is concise and practical. The weakest chapter is perhaps that on tumours. In this he is a little brief and on the whole he follows the teachings of Ewing and his school. The pathology of the thyreoid and stomach is excellently done, especially the section on gastric carcinoma. He has undoubtedly been greatly influenced by the findings of the workers at the Mayo Clinic in both of these subjects. His description of the pathological conditions of the gastro-intestinal tract is full, accurate and well arranged. Appendicitis and related conditions are treated in a separate chapter and this constitutes a balanced if somewhat didactic discussion of the subjects. As is to be expected from one who has made a special study of the subject and who has contributed notably to the literature, the diseases of the gall bladder are very fully described and discussed. This chapter is full of original observations and is stimulating and concise. He has brought forward and correlated most of the modern views and observations on the subject.

[1] "Surgical Pathology," by William Boyd, M.D., M.R.C.P. (Edinburgh), F.R.C.S.; 1925. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little. Royal 8vo., pp. 837, with 349 illustrations and 13 coloured plates. Price: 50s.

The chapter on genito-urinary pathology is very full and he has attempted to correlate the disordered function with the pathological findings. Tumours of these organs are dealt with fully and he has slavishly followed Ewing in his classification.

In dealing with the histology of papillomata of the bladder he follows the French teaching in insisting that they are all at least potentially malignant in spite of their apparently benign histological nature. The pathology of the female reproductive system is described very fully in a manner which makes this chapter one of the best and most complete in the book.

The breast and its pathology with its many problems are discussed in the light of the recent obesrvations of Keynes, Cheatle and Bloodgood and the account is full and well balanced. He is influenced greatly by and quotes the work of Handley on the question of the dissemination of breast carcinoma, but believes that dissemination by the blood stream can alone explain the later metastases. In describing the pathology of arterial disease he rightly insists that the subject is one of real surgical interest and he attempts to sort out the many diverse views on the question and has evolved a satisfactory classification and description of this most controversial part of pathology. The diseases of the spleen and lymphatic glands are fully discussed and these chapters are a sound summary of present day knowledge of these subjects. The pathology of the brain and spinal cord is described purely from the point of view of the surgeon and his observations fill a great want. He has also restricted himself to those conditions which are relatively common. The final chapters on the diseases of the bones, joints and so forth are full and excellent throughout.

Throughout the book one is struck by the author's sense of proportion which does not allow the uncommon and unimportant diseases to be emphasized to the exclusion of the more familiar and this makes the whole a well balanced exposition of the subject. There is little, with the exception of the chapter on gall bladder pathology, that is original, the work having been compounded from many sources. The author has, however, exercised careful discrimination in accepting only what is recognized as sound or proven and neglecting much that is imaginative and theoretical. The book is illustrated profusely and although the illustrations do not come up to the standard that one usually associates with American productions, they are accurate and serve their purpose. The result is a sound up to date work which should be of very great value to all operating surgeons.

COMMON AILMENTS.

Leonard Williams's "Minor Maladies and Their Treatment" has reached its fifth edition and though "carefully revised" and in parts "completely rewritten," is still the wise, pleasant-spoken, practical friend whose acquaintance we made in the first edition.[1]

Some nineteen years ago this book came as a boon to the man fresh from the university and the hospital, for whom a double pneumonia or a laryngeal diphtheria had few terrors, but to whom a colicky infant or a common cold was a therapeutic nightmare.

The chapter on "Some Drugs and Their Uses" still acts as a sound corrective to the easy indolence of more mature years which unblushingly pledges its early ideals for a few hours sleep by the prescription of some new-fangled, symptom-soothing, proprietary powder. And in these later years we browse through its pages and with a sense of self-congratulatory delight recall the successes to which its underlined passages led us, and the pitfalls from which its faint flavour of elderly egotistical dogmatism saved us. And in whatever age of professional life we read it we add something here and there to our routine examination of patients or bait the therapeutic hook with a new fly culled from the book of this expert angler.

Contrasting the fifth edition with the first, we find that for the chapter on "Change of Air" the author has substituted a short statement of the position in reference to minor glandular insufficiencies. Generally speaking this account is reasonable and fad-free; but we hardly subscribe to the phallic fetishism of the author's ancients nor will we bow the knee to the Simian substitute for Aaron's golden calf. If such things be true, then indeed is male longevity become dependent upon the prolificness of the chimpanzee and a man's ancestors become his expectation of life. But turning to the other sex of the question, where, oh where shall our poor sisters look for help? The short additional chapter on old age is racily written and serves to correct our schoolboy evil opinion of Cicero's *De Senectute* as well as enhance our professional regard for Robert Saundby's "Old Age: Its Care and Treatment in Health and Disease." To our mind the most helpful additions are the notes on a constant succession of colds and the significance to be attached thereto and to a slightly lesser degree those on diet. In the latter a healthy rebuke is administered to the fanatics for whom diet is a polite synonym for starvation. "In the case of the stomach the responsibility is generally placed upon the diet, which is pared and whittled both in quantity and quality until the fare of King Nebuchadnezzar may seem generous in comparison."

Almost worthy to rank with the aphorisms of the late Samuel Gee is the author's dictum that "apart from aneurysm, a cough which is persistent, obtrusive and futile, generally has its cause not above but below the diaphragm." It is refreshing to find the credit for a brilliant saying correctly bestowed as is done by Dr. Williams in ascribing to Trousseau the aphorism that "an anæmia which does not yield to iron is probably due to tubercle."

The most glaring typographical blemish occurs on page 52, where "a sixth part" should obviously read "a sixteenth part"; there is a misprint on page 352 where "Enthymol" should read "Euthymol."

[1] "Minor Maladies and Their Treatment," by Leonard Williams, M.D.; Fifth Edition; 1923. London: Baillière, Tindall & Cox; Crown 8vo., pp. 428. Price: 7s. 6d. net.

Analytical Department.

"PETROLAGAR."

"Petrolagar" is an emulsion of liquid paraffin and agar agar manufactured by The Deshell Laboratories Incorporated of Los Angeles, United States of America. Four different preparations are offered for sale, namely plain "Petrolagar," "Petrolagar" with phenolphthalein, "Petrolagar" with magnesia and "Petrolagar" without sugar. These four preparations have been submitted to analysis by The Medical Journal of Australia. Our analyst reports that the mineral oil is intimately blended with the agar agar, flavoured with essential oils and emulsified by special process. The emulsion is permanent. The preparation is essentially the same in all four, the only differences being the addition of phenolphthalein and magnesia in two of them and the absence of sugar in the third. No arsenic, lead, copper or other harmful metal is present. The analysis revealed that liquid paraffin of the British Pharmacopœia and refined agar agar were present in about equal proportions in all the samples handled. Sugar was found in all but the fourth in addition to flavouring essences. A trace of water was recovered from each. The incombustible residue weighed 0.005 gramme per hundred grammes in the plain "Petrolagar," 0.095 gramme per hundred grammes in the phenolphthalein preparation, 1.07 gramme per hundred grammes in the magnesia preparation and 0.08 gramme per hundred grammes in the "Petrolagar" without sugar. The quantity of phenolphthalein and magnesia, respectively 0.31 gramme and 0.47 gramme per hundred cubic centimetres, coincides very closely with the amount mentioned on the label.

The proprietors claim that the emulsification of the mineral oil increases the efficiency of the preparation as an intestinal lubricant and causes it to mix intimately with the intestinal contents. The agar agar is held to add bulk to the contents and to aid the peristaltic action. From the result of the analyses we are satisfied that these claims are justified. "Petrolagar" is pleasant to take.

The Medical Journal of Australia

SATURDAY, JUNE 27, 1925.

Progress in Midwifery.

THE demand for efficient midwifery has of recent times become more and more clamant throughout the Commonwealth. Not only has the medical profession concerned itself with the necessity for improvement in the practice of this branch of medical science and with the elaboration of methods calculated to achieve this end, but the general public also, headed by the lay press, has taken up the cry. Even politicians whose motives are frequently suspect, have professed concern in the problem. This public interest is not without significance, for although the *vox populi* is a slender reed on which to lean, the cooperation of the people is important; after all it is they who have to provide the money for most activities requiring financial aid.

THE MEDICAL JOURNAL OF AUSTRALIA has attacked the problem of improving the status and efficiency of midwifery time and time again. Considerable emphasis has been laid on the necessity for improving the teaching given to students on the subject. We have pointed out that childbirth is or should be a physiological and not a pathological process and that until students are so trained that they can go into the world as competent obstetricians and thus help to bring about a lowering of maternal and infantile morbidity and mortality, the pathological and not the physiological will predominate. Among other points on which we have laid stress, is the tendency to divorce the theoretical from the practical in the teaching of students. There is also a necessity for a proper sequence in the subjects of the obstetrical curriculum, for the association of biochemistry and biophysics with a knowledge of the anatomy of the female organs of generation, the substitution where possible of practical demonstration for systematic lecture and the consequent more individual nature of the tuition, the importance of work in the obstetric wards, the witnessing of normal births and the management of several labours under proper supervision, the subsequent attendance at an antenatal clinic where routine methods of examination for the detection of normal and abnormal conditions are taught and finally the assumption of a reasonable amount of responsibility by the student in the conduct of labour. Such is the general outline of what we claim to be a suitable foundation for a satisfactory obstetrical curriculum. A curriculum, however, is useless without a proper teaching staff and well equipped hospitals where they may teach. We have expressed the opinion that hospitals and clinics should be supported by State subsidy and should be under the control of a director of obstetrics who would be responsible for the general arrangement of the training and for the conduct of the institutions from the professional point of view.

Progress along these lines is being slowly and surely made and it is well to review the present position, to note the satisfactory points and to guard against mistakes which may be difficult to correct.

In Victoria the Victorian Branch of the British Medical Association urged by its energetic President of 1924, Dr. J. W. Dunbar Hooper, has been active. Its campaign has been well planned. The *questionnaire* sent to members of the Branch elicited much useful information. The prize essay, the determination of which is in the hands of a special committee, will probably do the same. The post-graduate course in obstetrics in Melbourne promises to be of much use to practitioners. At the opening lecture forty-five members joined the course. Many senior members of the profession attended to show their interest in the new departure. The fact that medical practitioners can go into residence at the Women's Hospital to see the work of the institution in its entirety is an opportunity which should be seized with eagerness. Some vacancies still exist for this part of the programme. As far as the teaching of students in Victoria is concerned an advance may be expected. Owing to the generosity of the Trustees of the Edward Wilson (*Argus*) Trust in donating a sum of ten thousand pounds for the

purpose a director of obstetrical research will soon be appointed.

At the University of Sydney a professor in obstetrics has been appointed. Professor Windeyer has the confidence of the medical profession and their support in his endeavours to remodel the curriculum of his department on the right lines. There is one point which needs emphasis in regard to his work and that in Victoria. A curriculum cannot be altered or built up in a day. Much time is taken in planning the syllabus and arranging the work so that it will be coordinated with the other subjects of the medical course. If more practical work is to be allotted to students, arrangements must be made at the obstetric teaching hospitals which allow this. A suitable assistant staff has to be appointed. The question of an assistant staff is of great importance and for this care will have to be exercised that the right man is chosen. Efficiency and teaching ability regardless of all other considerations must alone be allowed to influence those who make the appointments.

In South Australia temporary arrangements are being made whereby more practical work will be provided for students. A piece of ground has been made available on which it is proposed to erect an obstetrical department at the Adelaide Hospital at a later date.

Progress has undoubtedly been made towards the provision of better teaching in midwifery. Enthusiasm must not be allowed to wane nor interest to fail. The campaign must be carried on until complete success is assured.

Current Comment.

THE PHYSICAL STRENGTH OF DIABETICS.

Persons suffering from *diabetes mellitus* in its advanced stages are usually wasted, weak and sluggish in their bodily movements. In the earlier stages loss of weight is often produced by the restriction of diet necessary to eliminate the glycosuria or to bring it to a minimum. When diabetes is associated with tuberculosis the wasting is usually greater. It is usually held that the weakness in the thin diabetic is the direct result of the disappearance of muscular tissue. J. R. Williams claimed in 1917 that the weakness of diabetic persons bore a direct relationship to their food tolerance. W. R. Miles and H. F. Root produced evidence in 1922 to show that the diabetic was less vigorous than the normal person of the same weight and that he was mentally less efficient and active. They came to the conclusion that even the patient who was apparently restored to health by dietetic treatment, retained a diminished physical and mental efficiency. If the assumption of a direct dependence of lost strength on insufficient food be justified, it is obvious that it would be a physiological mistake to diminish the caloric value of the diet of the patient below the metabolic needs of the body. It would be a small gain for a diabetic patient to be starved until his glycosuria disappeared, if the starvation so impaired his physical and mental vigour that his chances of performing the ordinary functions of life and of resisting the dangerous infective processes thereby became remote. The importance of this aspect of the diabetic problem is evident. Dr. R. Fitz and Dr. William P. Murphy have carried out some interesting experiments and investigations, which appear to throw light on the subject.[1] They employed Lovett and Martin's resistance strength test as a measure of muscular efficiency and found it simple and accurate. This test depends on the measured resistance of selected muscle groups to stretching. From the results obtained it was possible to calculate the total muscular strength of the body. Preliminary studies on eighteen normal men of ages varying between twenty-one and forty-two years, with weight varying from forty-eight to eighty-nine kilograms and with height varying from one hundred and sixty-six to one hundred and eighty-nine centimetres, revealed that the total strength varied between 1,100 and 2,000 kilograms with an average of 1,441, while the strength-weight ratio varied between 15.7 and 26.6, with an average of 21.2. Studies made with women yielded similar results. The extremes of the total calculated strength were 700 and 1,100 kilograms and of the strength-weight ratio were 11.7 and 18.7. They found that by repeating the tests in a normal man over a period of about a month, the strength figures rose during the first ten days and then remained practically at the same level. It is probable that this apparent gain in strength was due to practice in resisting the muscle stretching. Further observations revealed that a temporary loss of muscle strength followed exercise, want of sleep and infection. In the next place they subjected a group of adult male diabetics to the tests. The height of these men varied between one hundred and sixty-five and one hundred and eighty-three centimetres, while their weight varied between forty-five and seventy-one kilograms. The calculated strength varied from 690 to 1,270 kilograms, while the strength-weight ratio varied from 13.9 to 25.8. Of fourteen diabetic patients five had a total strength of under 1,000 kilograms, that is less than 60% of a normal man. Two of these men died within two months of the application of the tests, two responded to treatment and the fate of the fifth remained unknown. Similar observations

[1] *Archives of Internal Medicine*, September 15, 1924.

were carried out in five women with diabetes. The same lowering of the total strength was noted, but in the case of these five women the strength-height ratio was unchanged. The authors recognize that this may have been accidental, in view of the small number of subjects. The investigations were taken further in order to ascertain whether the weakness was general or whether any particular groups of muscles were more affected than others. The result of these studies showed that the weakness is general and not limited to any special group of muscles. The authors conducted an ingenious and significant experiment. A normal, thin man, aged forty-two years, weighing forty-eight kilograms, that is twenty-two kilograms below the normal weight for his height (one hundred and seventy centimetres), was selected, as was a diabetic man, aged forty years, weighing fifty kilograms, which is twenty-six kilograms below the normal for his height (one hundred and seventy-seven centimetres). The strength of various muscle groups was tested separately and the total strength and the strength-height ratio were also estimated. The normal man had been thin all his life and was leading a "very normal" and productive life as a physiologist. The diabetic patient had been under treatment for ten years, unable to do a full day's work. He had gradually lost weight, but had kept up his strength by taking exercise systematically. The patient was not glycosuric. The authors state that while the two men were comparable from the physical point of view, there was a great difference between them in their mental attitude. The normal man was eager, quick in his motions and accustomed to work at top speed. The diabetic man was slow and worked mentally at a slow speed. The basal metabolism of the normal man was normal, while that of the diabetic was —18. The total strength of the former was 1,030 kilograms and of the latter 1,020 kilograms; the strength-height ratio of the former was 21.6 and of the latter 20.4. This observation seemed to indicate that factors other than chronic inanition are concerned in producing the symptoms and physical signs of diabetes. Records were kept of selected patients over a long period. From these records it appears that the strength curve is not parallel with the weight curve, that provided that the patient is prevented from losing weight, his strength can be increased independently by means of systematized exercise and that the total caloric value of the diet rather than the distribution of carbo-hydrate, protein and fat in the diet is of importance in increasing the strength. The authors demonstrate that nothing is gained by fattening patients rapidly with the aid of "Insulin." They have found it wiser to give smaller quantities of "Insulin" and to give just enough food to produce a slow gain in weight. The gain in strength follows more certainly in this way.

These important observations would seem to indicate that the loss of physical and mental vigour is not caused by the loss of body weight due to inanition, but is a result of the diabetic process. Treatment by "Insulin" has no direct effect on the muscular strength or on the mental alertness of the patient. Whether or not the reduced power of oxidation of the tissues of diabetic persons is responsible for this loss of strength is not known, but that something more than a raised sugar tolerance is needed to improve the vigour of the patients seems to be probable in view of the satisfactory course when the patient can take ample exercise and a moderate diet. This work is not calculated to throw light on the nature of the initial lesion of diabetes nor on the physiology of the pancreatic hormone and the relationship between a deficiency of this hormone and hyperglycæmia. It is of importance merely in regard to the management of the diabetic patient.

British Medical Association News.

SCIENTIFIC.

A Meeting of the South Australian Branch of the British Medical Association was held at the Adelaide General Hospital on March 26, 1925. The meeting took the form of a series of clinical demonstrations.

Plural Effusion and Displacement of the Cardiac Beat.

Dr. Guy Lendon showed a woman, aged sixty-seven years, with a plural effusion of large size the cause of which was unknown. The apex beat of the heart was displaced five centimetres (two inches) to the right of the sternum. The effusion had the character of a serous transudate. Dr. Lendon pointed out that the displacement of the apex beat to the right of the middle line by a simple serous effusion was a comparatively rare condition.

Carcinoma of the Stomach.

Dr. Guy Lendon also showed a female patient, aged fifty-four years, who complained that for six months she had been losing weight and that her stomach had been lately "growing hard." An enormous downward enlargement of the liver was present, its lower border extending to five centimetres below the umbilicus. The swelling was firm and nodular. One classical umbilicated nodule about 3.75 centimetres (half an inch) could be felt. Both the Wassermann test and the hydatid complement fixation tests had been carried out, but no reactions had been obtained. The test meal had revealed complete anacidity and an X-ray examination had disclosed a filling defect in the stomach. Dr. Lendon drew attention to the size of the growth, the presence of palpable, umbilicated nodules, the absence of evidence of obstruction of the biliary passages or portal circulation and the absence of symptoms from the primary growth.

Aneurysm of the Aorta.

Dr. Guy Lendon's third patient was a man, aged twenty-nine years, who had complained of pain in the precordial region for three months. The patient had a pulsating tumour in the left side of the precordium. The swelling was raised about 1.25 centimetres above the surface and an area of dulness spherical in outline had been found posteriorly on the left side of the chest. X-ray examination had revealed the presence of dilatation of the descending aorta. The apex beat was displaced downwards and outwards and an aortic diastolic murmur could be heard. The systolic blood pressure was 175 millimetres of mercury while the diastolic was 65 millimetres. Dr. Lendon said that the chief points of interest were the age of the patient, the size of the aneurysm and its mode of projection, and the association of aortic regurgitation with an aneurysm of the descending aorta.

Dr. S. R. Burston also showed three patients suffering from aneurysm of the aorta.

Bacillary Dysentery. (Flexner Type.)

Dr. C. M. Deland reported the history of a girl, aged eighteen years, who was under the care of Dr. D. R. W. Cowan. The patient had been admitted to the Adelaide Hospital complaining of sore throat, headache, slight diarrhœa and abdominal pain. A provisional diagnosis of acute tonsillitis had been made. Three hours after admission the pain in the abdomen had increased, the motions had become fluid and had contained much blood and mucus. Tenesmus had been present and fluid motions had been passed every half-hour or less. The temperature had risen to 38.9° C. (102° F.). A culture had been made from the motion on to bile-salt-lactose-agar and many non-lactose fermenting colonies had appeared. These had afterwards proved to be *Bacillus dysenteriæ* of Flexner. Up till this time the patient had been treated with eight cubic centimetre (two fluid drachm) doses of a saturated solution of sodium sulphate every two hours with occasional doses of morphine. After the bacteriological diagnosis was made it had been decided to use antidysenteric serum. The patient had been given a small dose intradermally to test her sensitiveness to serum. As no effect had been produced thirty cubic centimetres were given by subcutaneous injection, followed in half an hour by ninety cubic centimetres by intravenous injection and by another ninety cubic centimetres given intravenously eight hours later. The serum which had been used, was the Commonwealth Serum Laboratory polyvalent antidysenteric. Half an hour after the first intravenous injection the patient had passed a typical dysentery motion. Two hours later the tenesmus had ceased. Four motions had been passed in the next twelve hours, these had contained mucus but no blood and were fluid in consistency. The amount of sodium sulphate had been decreased to one dose *per diem*. Since that time the motions had been firm and had been passed regularly once or twice a day. On a few occasions only had there been a little blood and mucus present. The patient had experienced no pain and at the time of the meeting was feeling well. On the sixth day after the injection of serum a generalized urticaria had appeared and this had been accompanied by a slight rise of temperature.

Achondroplasia.

Dr. Ray Hone and Dr. Ruth Gault showed a female child, aged ten months, suffering from achondroplasia. The child was very well nourished, the trunk was of normal size and the head appeared too large for the rest of the body. The limbs were relatively very short and the fingers were short and stumpy and were all of the same length. The tongue was kept constantly protruded from the mouth. The fontanelles were of normal size and the state of intelligence normal. On being made to stand the child manifested a definite lordosis of the spine and a protruberant abdomen. It was stated that the child's grandmother had been a short, fat, broad woman and that the brothers and sisters were tall. No other family history of the condition could be obtained. The following comparative measurements of the patient and of a normal child were given.

Measurement.	Patient.	Normal Child.
Length	60 centimetres (24 inches)	67.5 centimetres (27 inches)
Head Circumference	46.25 centimetres (18½ inches)	45 centimetres (18 inches)
Situation of Mid-point	Half-way between ensiform cartilage and umbilicus	At umbilicus
Arms	8 centimetres (3¼ inches)	12.5 centimetres (5 inches)
Thighs	11.25 centimetres (4½ inches)	17.5 centimetres (7 inches)

X-ray examination had revealed an enlargement and splaying of the ends of all the long bones, their shafts being short and thickened.

No increase in the cartilaginous tissue at the epiphyseal line was present and the epiphyses were normal in appearance.

Carcinoma of Both Breasts and of the Ovary.

Dr. Ethel Read showed a female patient, aged fifty years, who had had a carcinoma of the breast removed eleven years previously by a radical operation. The operation had included removal of the axillary glands which were unaffected. Eleven years later a carcinoma had appeared in the opposite breast and it had been removed by a similar procedure. Dr. Read said that six months previously the patient had noticed a swelling in the lower part of the abdomen. An exploratory operation had been performed and a malignant and inoperable papilloma of the ovary had been found. Examination revealed no signs of recurrence in the scars resulting from the operations on the breast nor could any signs of secondary deposits be found in the liver and skeleton. The interest of the case lay in the fact that the patient had had three malignant growths in different regions occurring at long intervals of time and that the first two conditions had apparently been cured by operation.

Kyphosis Due to Rheumatoid Arthritis.

Dr. A. D. Lamphee showed a man, aged twenty-four years, with kyphosis in the lower dorsal region. He had first complained of pain twelve months previously while working on an irrigation block. The pain had started in the small of the back and had travelled up the spine to the shoulders. It had been worse on bending the back. The back had gradually become stiff and the patient had been compelled to stop his work four months previously on this account. One month after stopping work the patient had complained of pain in both knee and hip joints for a short time, but this had become easier. The patient had had influenza just prior to the onset of his complaint. There was no family or personal history of tuberculosis and gonorrhœal infection was denied. The spinal column was rigid and moved as a whole. A distinct kyphosis was present and was most noticeable in the region of the ninth and tenth dorsal vertebræ. Generalized muscle wasting was present and weakness of the arm muscles prevented the patient from raising his arms more than ninety degrees. No foci of infection could be detected and the lungs were normal. X-ray examination had revealed no abnormality in the bodies of the vertebræ. The condition was probably one of rheumatoid arthritis. Dr. Lamphee pointed out that the case was interesting because of the resemblance of the condition on clinical examination to tuberculous disease of the spine and also because X-ray examination revealed no collapse of the vertebræ and at the same time a distinct kyphosis was present.

Fracture of the Clavicle with Injury to the Brachial Plexus.

Dr. Myles Formby showed a man, aged twenty-two years, who had fallen off a motor cycle on to his shoulder and had fractured his clavicle at the junction of the middle and outer third. The fracture had been treated by Sayre's method. Two weeks later the strapping had been removed and the patient had complained of inability to raise his arm. Examination had then revealed the fact that the fracture was ununited and that definite wasting of the scapula, arm and forearm muscles was present; this was especially noticeable in the deltoid and biceps. Loss of power had also been present in the deltoid and biceps and in the supinator muscles of the forearm. Anæsthesia to protopathic sensation had been found in an oval area over the shoulder; to epicritic sensation the area of anæsthesia had been slightly larger. The reaction of degeneration had been present in the infraspinatus and deltoid muscles. The biceps, *supinator longus*, *supinator brevis* and other arm muscles had all responded to fara-

dism. Dr. Formby said that the interest of the case lay in the extensive nerve injury accompanying what seemed to be a simple fracture. The nerve had apparently been torn by the force of the fall depressing the shoulder away from the head and thereby stretching and tearing the outer cord of the brachial plexus. The result was a lesion comparable to an Erb's palsy. The patient was being treated with his arm abducted and his elbow flexed on an abduction splint. He was also having massage and galvanism for the paralysed muscles. It was still questionable whether the continuity of the nerve was grossly destroyed and might later on require operative treatment. The amount of recovery under the treatment which was being administered, would decide the point.

Actinomycosis of the Chest Wall.

Dr. Myles Formby also showed a boy, aged ten years. The patient stated that he had bumped the front of his chest six weeks previously and that nine days after the injury a painful lump had appeared at the site. An abscess had been opened, but the inflammatory mass had spread and two subsequent incisions had been necessary. No sinus extending to the bone had been detected and no abnormal physical signs had been present in the lungs. X-ray examination, however, had revealed an area of consolidation in the upper portion of the left lung near the mediastinum with several small outlying discrete opacities suggestive of tuberculous pneumonia. Examination of smears and culture from a recent adjoining abscess had revealed the presence of *Staphylococcus aureus* only. The swelling had continued to spread, overlying skin had become tense and cyanotic and the discharge of yellow pus more profuse. An operation had been performed to remove the necrotic tissue and to find a focus of infection in the underlying bones. Sections of tissue removed had consisted of granuloma with colonies of actinomyces. After operation the wound had been packed with Calot's fluid and had become covered with healthy granulations. Iodide of potassium had been given in large doses and the patient's general condition had slightly improved, but in four weeks another abscess surrounded by a brawny swelling had formed in the left supraclavicular fossa. This had been opened and scraped. Dr. Formby pointed out that the general condition had at first been thought to be tuberculosis arising probably in a rib until microscopical examination had revealed the presence of actinomycosis which had apparently had its origin in the lung near the mediastinum.

Discoid Keratitis.

Dr. A. J. Lewis showed a boy, aged fifteen years, who had been hit in the right eye six weeks previously with a cricket ball. Since the injury vision had been blurred and pain had been present. The patient had suffered from photophobia. The conjunctival vessels and the upper tarsal conjunctiva had been injected and the vessels around the limbus prominent. The central part of the right cornea was hazy in the centre and in the middle of this area there was a small dense opacity from which striæ radiated. The right iris was discoloured and the pupil was slightly dilated but regular and active. Dr. Lewis said that the points of interest were the history of injury six weeks previously, the duration of the condition and the dense central scar with radiation and surrounding halo.

Ectropion and Symblepheron following Trachoma.

Dr. Lewis also showed a man, aged seventy-two years, who had had trachoma for thirty-four years and during that time had undergone two operations for the removal of granulations. He had latterly complained of pain, photophobia and lacrymation and had ptosis of both upper eyelids together with ectropion of both lower lids. The conjunctivæ were swollen, red and granular. Both corneæ were clear and in the left eye there was a symblepheron joining the cornea to the outer part of the lower lid. The patient also had a dacryo-cystitis on the left side and a rodent ulcer had been present on the left cheek near the angle of the mouth. An ulcer about 2.5 centimetres (one inch) in diameter had been present for twelve years. The conjunctival secretion had contained streptococci. The patient had been treated with douches of perchloride of mercury solution, the left lacrymal sac had been removed under local anæsthesia and the wound had healed without suppurating. A month later the symblepheron had been divided and the conjunctiva sutured. During this period the rodent ulcer had been exposed to X-rays on two occasions and had practically disappeared. The patient was awaiting operation for the ectropion. Dr. Lewis said that the points of interest were the presence of ectropion and symblepheron as a sequel to trachoma, the presence of dacryo-cystitis the causal organism of which was the streptococcus and not the usual pneumococcus and the rapid improvement of the rodent ulcer after exposure to X-rays.

Hydatid Disease of the Lung.

Dr. John Corbin showed the X-ray photographs of the thorax of a woman who had been suffering from loss of weight, cough, hæmoptysis and a dry pleurisy for six months. She had been examined by X-rays and the plates showed a rounded opacity near the hilum of the lung, the upper portion of which was a transparent segment as if it contained air. A hydatid complement fixation test had been done and a positive result had been obtained. It had been difficult to decide from what aspect to approach the cyst owing to its central position, apparently attached to the hilum. By a careful study of the stereoscopic plates the cyst had been thought to lie a little anteriorly, so an incision had been made in the anterior axillary line. Three and three-quarter cubic centimetres (two and a half inches) of the fifth and sixth ribs had been removed and the pleura opened. The lung had collapsed and the hydatid cyst had protruded from the region of the lung hilum. The cyst had been brought to the surface, packing had been inserted around it and its wall incised. This had been followed by a rush of gas from the cyst and then purulent material containing portions of hydatid membrane had been evacuated. The cyst had been marsupialized by stitching the edges of the incision to the chest wall. Recovery had been uneventful.

The chief points of interest were the X-ray appearance of the cyst, the air in the upper portion giving the cyst a compressed or horse-shoe appearance and the method of approach at operation for its removal.

Multiple Sinusitis.

Dr. H. M. Jay showed a patient who had been referred to him on account of bulging of the right supraorbital margin and downward displacement of the eye. There had been a history of constant severe pain and of occasional copious watery discharge from the right side of the nose. Transillumination had shown the right frontal sinus to be enormously distended, the left eye to be dull and the right maxillary antrum black. A diagnosis of mucocœle of the right frontal sinus with probably purulent infection of the left frontal sinus and right maxillary antrum had been made. An X-ray photograph had strengthened this view. No pus had been found in the nose, but a history of removal of a polypus from the right side some years previously had been obtained. Both frontal sinuses had been opened externally according to the method described by Howarth. The right had contained clear mucus, the left pus and the bony septum between the two had been absent, as on perforating the mucosa the contents of the two cavities had mixed. The right antrum had been found to contain pus. The ethmoids had been extensively diseased and had been cleaned out through the external wounds.

Dr. Jay said that he showed the patient because mucocœle of the frontal sinus was far from common and he considered that its association with a purulent sinusitis of the other side added considerably to its interest. The fact that the nose was quite free from any discharge of any sort one month after operation proved to his mind the value of Howarth's procedure, the main feature of which was the exenteration of the ethmoid as an essential part of the operation. It also had the advantage that no

scarring or depression remained. Another point of interest in the case was that it illustrated the influence of such conditions upon the auditory apparatus. The patient's hearing had improved 100% since operation without any local treatment to the ears.

Cœliac Disease.

Dr. Helen Mayo showed a patient, aged one year and eleven months, who was suffering from cœliac disease. The child, a boy, had been perfectly well until five months previously when his digestion had become upset. The child had got well and five weeks prior to demonstration had suffered from a severe attack of diarrhœa with frequent stools (twenty-four a day). Since that time the child had not been well and had passed white or pale, porridge-like motions of large size. The child's appearance was typical of the disease, the body was wasted and the expression apathetic. Four laboratory investigations had been completed. In view of the fact that glycosuria had recently been reported as occurring in cœliac disease the urine had been repeatedly examined for sugar, but none had been found. The blood sugar percentage was 1.1. Dr. Mayo read Samuel Gee's description of the disease.

Hirschsprung's Disease.

Dr. Mayo also showed a child, aged two and a half years, who was suffering from Hirschsprung's disease. The history was one of digestive disturbances since birth. The child was extremely small for its age and mentally deficient. Dr. Mayo showed a skiagram of the large bowel.

Jaundice and Extensive Infarction of the Liver.

Professor J. B. Cleland showed specimens obtained at autopsy and demonstrated extensive infarction of the liver accompanying jaundice. He also read the history of the patient's illness.

A single woman, aged forty, had been admitted to the Adelaide Hospital under the care of Dr. Hone on February 26, 1925, with a history of having been confined two days previously and of having had "pain in the stomach and wind" for nine days. She had been somewhat irrational. The pain in the stomach had been reported as of sudden onset followed by the belching of a great deal of wind. The pain had been practically constant, did not double her up and had not become worse since it started. She had been very feverish for some days. She had had no pain when she breathed, but was very short of breath. Bleeding had occurred constantly since her baby was born. On examination she had been emaciated and thin looking, very nervous and with an anxious expression. Her temperature had been 35.7° C. (96.2° F.), later rising to 37.6° C. (99.8° F.). The upper part of the abdomen had moved with respiration. A foul-smelling red discharge from the uterus had been present and the cervix was badly torn. The urine had contained much acetone and diacetic acid, a slight amount of albumin and blood and some blood casts. No leucin or tyrosin crystals had been found. Next day by daylight she had been seen to be deeply jaundiced. Respiration had been very rapid and the pulse weak. The liver dulness had extended half way between the costal margin and the umbilicus. She had passed frequent brown liquid motions. At 1 p.m. she had had air hunger and had died at 7.30 p.m..

At the autopsy the body had been seen to be very jaundiced. The much enlarged liver had weighed 2,462 grammes (87 ounces). The right lobe had extended 3.75 centimetres (one and a half inches) below the umbilicus. It had been vivid purple in colour with some yellow patches near the hilum surrounded by a deep purple narrow ring. Section of the right lobe and the median part of the left lobe had revealed numerous irregularly-shaped and disposed patches of infarction up to 1.8 centimetres (three-quarters of an inch) in diameter, bright yellow in colour and surrounded by narrow purplish zones. The rest of the left lobe had not been so much affected. The kidneys had been enlarged and pale on section, the spleen enlarged and somewhat diffluent. The inner surface of the uterus had contained some dark, soft material, but nothing suggestive of sepsis. The *os uteri* had easily admitted three fingers. The lochial discharge had been foul and purulent. Microscopical examination of the liver had revealed extensive irregular infarcted areas in which the liver cells were necrosed and the capillaries filled with red cells.

Professor Cleland said that in the *post mortem* account no record had been made of the condition of the portal vessels and their tributaries. The extensive infarction in the liver had presumably followed thrombosis or embolism of several branches of the portal vein. In the liver there was no evidence that such thrombosis was septic. The jaundice, toxic symptoms and death seemed all attributable to the injury to the liver. The thrombosis or embolism in the portal system had presumably been associated with the recent pregnancy and was the result either of puerperal sepsis or the tendency for thrombosis to occur in the puerperal state. The early appearance of the jaundice (on the second day) was against the view that sepsis was the cause of the infarction.

Jaundice with Little Change in the Liver.

Professor Cleland also showed specimens, obtained at *post mortem* examination of a body of a woman who had died from sepsis. He also read the clinical notes of the case.

A married woman, aged twenty-two, had been admitted to the Adelaide Hospital under the care of Dr. W. A. Verco on April 18, 1925. She had been ill eight days. She had been confined, instruments being used to effect delivery. Two days later her illness had begun and she had become jaundiced. On admission she had been fairly deeply jaundiced. She had complained of abdominal pain. Her condition had gradually became worse. Her temperature had been very irregular, varying from normal to 40.2° C. (104.4° F.), tending to run towards the end between 37.8° C. and 38.9° C. (100° F. and 102° F.). The pulse and respiration had both been rapid. There had been much distress in breathing. She had died on April 24, 1925.

At the autopsy general peritonitis had been found. There had been half a litre (eighteen ounces) of purulent, flaky, bile-stained fluid in the left pleural cavity and three hundred cubic centimetres (twelve ounces) in the right. Streptococci had been grown from this pleuritic fluid. The spleen had been considerably enlarged, soft and septic looking, weighing four hundred and sixty-six grammes (fifteen and three-quarter ounces). The liver had been considerably enlarged and pale in colour, with scattered petechial blotches on the surface. On section it had been of yellowish stone colour. In the uterine cavity some tags of clotted blood had been found and a few fragments of placenta, but no clear evidence of sepsis, though streptococci were grown. The cortex of the kidneys had been swollen. Sections of the liver had shown only some small scattered areas of focal necrosis and bile pigment in some liver cells. The uterine wall had contained several small collections of cells, polymorphonuclear leucocytes, plasma and connective tissue deep in the wall.

Professor Cleland said that the onset of the jaundice was too early to be attributed to sepsis. Sepsis had unquestionably been present as shown by the peritonitis and pleurisy and the finding of streptococci. The jaundice was probably the result of a toxæmia of pregnancy.

Tuberculous Hip Disease.

Professor Cleland's third set of specimens demonstrated the changes which he had found in a case of old tuberculous hip disease.

A male patient, aged twenty-nine, had been admitted to the Adelaide Hospital under Dr. Cowan's care on March 8, 1925. He had had a tuberculous left hip since he was four years old. This joint had been fixed, but pus had discharged at intervals from sinuses. He had complained of pain in the chest and abdomen of four days' duration and had had a cough with expectoration for some time. The patient had died from his pneumonic condition, though his temperature had been subnormal during most of his stay in hospital.

The autopsy had shown the upper lobe of the right lung to be in a state of early organization after lobar pneumonia. It had had a granular, flesh-coloured appearance and had contained greyish, yellow degenerated areas. The spleen had been enlarged, firm and red, weighing four hundred and thirty-seven grammes (fourteen and three-quarter ounces). The liver had been much enlarged, weighing one thousand eight hundred and thirty-nine grammes (sixty-five ounces). The kidneys had weighed one hundred and ninety-one grammes (six and three-quarter ounces) each and had presented on section an unusual appearance. The interpyramidal cortex had been maize yellow in colour, the superficial cortex being similarly affected, but this had been less obvious owing to its narrowness. The medulla had been flesh coloured. At first sight the surface of the kidney had suggested patches of tuberculous caseation, but careful inspection of these parts had shown that the normal architecture was preserved. Amyloid changes in many of the glomeruli and arterioles and also interstitial patches of foamy lipoid cells (myelin cells) had been found on microscopical examination. The globules in these foamy cells had stained by Scharlach R and appeared as bright spherules when viewed through crossed Nicol's prisms. There had been some amyloid change in the spleen. The suprarenal glands, although comparatively normal looking to the naked eye, had contained extensive patches of necrosis of the cells of the cortex, the medulla being unaffected. This necrosis and fatty degeneration had seemed due to compression of the cells, probably from amyloid material deposited in the stroma between them. Examination of sections of the lung tissue had revealed commencing organization in the pneumonic lung. The basement membrane in some of the alveoli had been very much thickened probably from amyloid change.

Professor Cleland said that the interesting point was the occurrence of myelin deposits in the kidneys giving rise probably to the maize yellow colour. These deposits occurred in foamy-looking cells located in groups between the tubules. A good description was given by McNee in the *Journal of Pathology and Bacteriology* (Volume XXV., Number 4, 1922, page 425). In addition the patient had amyloid disease, the result of the sinuses connected with his hip joint. Organization had obviously been occurring in the pneumonic exudate which was present.

Fibromyoma and Carcinoma of the Uterus.

Professor Cleland also showed the uterus which had been removed at operation from a woman aged fifty-nine years. The patient had been admitted under Dr. Powell's care, complaining of a brown irritating discharge for about six months. She had felt a hard lump in her abdomen. She had had two children, the last thirty-two years previously. No loss of weight had occurred. A hard, irregular mass had been found occupying both iliac fossæ in the hypogastrium. At operation the mass had been found to consist of large fibromyomata forming a very irregular growth about half the size of a human head. The uterine cavity had communicated with another cavity in which there had been a good deal of broken down tissue. On section this had been found to be friable and microscopical examination had revealed the presence of columnar epithelioma. The right ovary had been enlarged, firm and filled with a somewhat friable growth as well as containing a number of miliary nodules of a bright yellow colour. Sections of the growth had revealed a similar structure to that in the uterus, probably representing a deposit from a primary carcinoma in the uterine body.

Peritonitis following Impaction of Mass of Hairpins in the Intestines.

Professor Cleland's last specimen had been obtained at *post mortem* examination on the body of a woman, aged twenty-four years, who had been admitted under Dr. Cavanagh-Mainwaring's care to the Adelaide Hospital on April 10, 1925, complaining of pains in the stomach of two days' duration. She had been in the Receiving Home for three months for puerperal insanity following pregnancy, seven months before her admission to the Adelaide Hospital. There had been an indefinite history of her having swallowed hairpins during this mental instability. Her temperature had been slightly raised and she had presented signs of an acutely inflamed abdomen. Operation had revealed general peritonitis, but no obstruction had been detected. The appendix and pelvic organs had been normal and there had seemed no cause for the condition. The patient had died and at the *post mortem* examination a bunch of hairpins and three wire nails had been found impacted in the small gut one hundred and eighty centimetres from the ileo-caecal valve. General peritonitis had resulted and there was acute dilatation of the stomach.

NOMINATIONS AND ELECTIONS.

THE undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association:

Burnett, Roland Kent, M.B., Ch.M., 1923 (Univ. Sydney), Darling Street, Rozelle.

Murray, Angus Johnston, M.B., Ch.M., 1923 (Univ. Sydney), Coast Hospital, Little Bay.

Walters, Cecil Julian Manning, M.B., Ch.M., 1923 (Univ. Sydney), Coast Hospital, Little Bay.

THE undermentioned have been elected members of the Victorian Branch of the British Medical Association:

Berryman, Cecil Bryden, M.B., B.S., 1925 (Univ. Melbourne), West Brunswick.

Box, Noel Edward Hamilton, M.B., B.S., 1925 (Univ. Melbourne), 286, Union Road, Surrey Hills.

Hall, Eric Martin, M.B., B.S., 1925 (Univ. Melbourne), Eltham.

Loughnan, Francis Stanislaus, M.B., B.S., 1925 (Univ. Melbourne), 10, Gillies Street, Fairfield.

Masel, Henry, M.B., B.S., 1925 (Univ. Melbourne), Melbourne Hospital.

Shannon, Harry, M.R.C.S. (England), L.R.C.P., 1921 (London), M.B., B.S., 1922 (London), D.P.H., 1923 (Oxford), 104, Wattletree Road, Malvern.

Correspondence.

FRACTURES OF THE LOWER EXTREMITY.

SIR: The paper by Dr. George Bell on "Some Fractures of the Lower Extremity" is of infinite value to the general practitioner and perhaps to some who would choose a more ambitious title. It is a pleasing contrast to the "graph" articles with which we are now so familiar in the medical journals, "graphs" the interpretation of which would require a Joseph and a Daniel at their best.

I would like some extra information, say, about Pott's fracture. What is really meant by "early movement" of the joint? The expression is common in every textbook and paper, but no actual period of time that should elapse between the date of the injury and the starting of the "early movement" is given. Is this period governed by any rules?

In Pott's fracture a portion of the external malleolus is torn away. Is it possible by splinting to restore this bit of bone to its original position and to obtain bony union? I have been disappointed in treating cases of this fracture to find when the patient has been able to go away for an X-ray examination that this bit of bone is lying free, although the functional result seemed all right. The fibula on the other is quite straight with no over-

lapping or deformity. Does failure to get the torn off portion of the malleolus indicate bad practice?

Yours, etc.,

"G.P."

June 6, 1925.

Proceedings of the Australian Medical Boards.

QUEENSLAND.

THE undermentioned have been registered, under the provisions of *The Medical Act of 1867* as duly qualified medical practitioners:

Black, Thelma, M.B., Ch.M., 1925 (Univ. Sydney), Maryborough.
Dart, John Leslie, M.B., 1925 (Univ. Sydney), Sandgate.
Davidson, Christopher Harold Montgomerie, M.B., Ch.M., 1924 (Univ. Sydney), Warwick.
Halberstater, Leslie, M.B., 1925 (Univ. Sydney), Mount Morgan.
Hishon, Mortimer John, M.B., 1925 (Univ. Sydney), Brisbane.
Lynch, John Aloysius, M.B., B.S., 1925 (Univ. Melbourne), Cairns.
Mackey, Wallace Arthur Arundel, M.B., Ch.M., 1922 (Univ. Sydney), Southport.
Mathews, William Robert, M.R.C.S. (England), L.R.C.P., 1892 (London), Malanda.
Mayes, Alexander Dunbar Aitken, M.B., 1925 (Univ. Sydney), Bilinga.
Smith, Robert Martin, M.B., B.S., 1925 (Univ. Melbourne), Canungra.
Taylor, Roy Stanley Le Cappelaine, M.B., 1925 (Univ. Sydney), Brisbane.
Wilson, William Roy, M.B., 1925 (Univ. Sydney), Toowoomba.

Medical Appointments.

Dr. T. E. V. Hurley (B.M.A.) and Dr. J. L. Thompson (B.M.A.) have been appointed Members of the Charities Board of Victoria.

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Dr. F. C. H. Ross (B.M.A.) and Dr. T. A. F. Heale (B.M.A.) have been appointed resident surgeons at the Women's Hospital, Melbourne.

* * * *

Dr. P. H. Wardell-Johnson (B.M.A.) has been appointed Medical Officer of Health for the city of Perth.

* * * *

Dr. W. H. Coutie (B.M.A.) has been appointed to act temporarily as Inspector-General of Mental Hospitals, New South Wales.

* * * *

Dr. Alfred William Hill (B.M.A.) has been appointed a Member of the Board of Optical Registration, South Australia.

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Dr. Rupert Leslie Naylor (B.M.A.), of Penong, has been appointed an Officer of Health, South Australia.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xlv..

AUSTIN HOSPITAL, HEIDELBERG, VICTORIA: Honorary Physician.

DEPARTMENT OF PUBLIC HEALTH, VICTORIA: District Health Officer.

ROYAL ALEXANDRA HOSPITAL FOR CHILDREN, SYDNEY: (*a*) Director of Pathological Department, (*b*) Bio-Chemist.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429, Strand, London, W.C..

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellow's Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIAN: Honorary Secretary, 12, North Terrace, Adelaide.	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIAN: Honorary Secretary, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

JULY 1.—Victorian Branch, B.M.A.: Branch.
JULY 3.—Queensland Branch, B.M.A.: Branch.
JULY 7.—New South Wales Branch, B.M.A.: Council (Quarterly).
JULY 7.—Tasmanian Branch, B.M.A.: Council.
JULY 9.—Victorian Branch, B.M.A.: Council.
JULY 9.—South Australian Branch, B.M.A.: Council.
JULY 9.—New South Wales Branch, B.M.A.: Clinical Meeting.
JULY 10.—Western Australian Branch, B.M.A.: Council.
JULY 10.—Queensland Branch, B.M.A.: Council.
JULY 14.—Tasmanian Branch, B.M.A.: Branch.
JULY 14.—New South Wales Branch, B.M.A.: Ethics Committee.
JULY 15.—Western Australian Branch, B.M.A.: Branch.
JULY 16.—Section of Neurology and Psychiatry, New South Wales Branch, B.M.A..
JULY 21.—Tasmanian Branch, B.M.A.: Council.
JULY 22.—Victorian Branch, B.M.A.: Council.
JULY 24.—Queensland Branch, B.M.A.: Council.
JULY 24.—Eastern Suburbs Medical Association, New South Wales.
JULY 28.—New South Wales Branch, B.M.A.: Medical Politics

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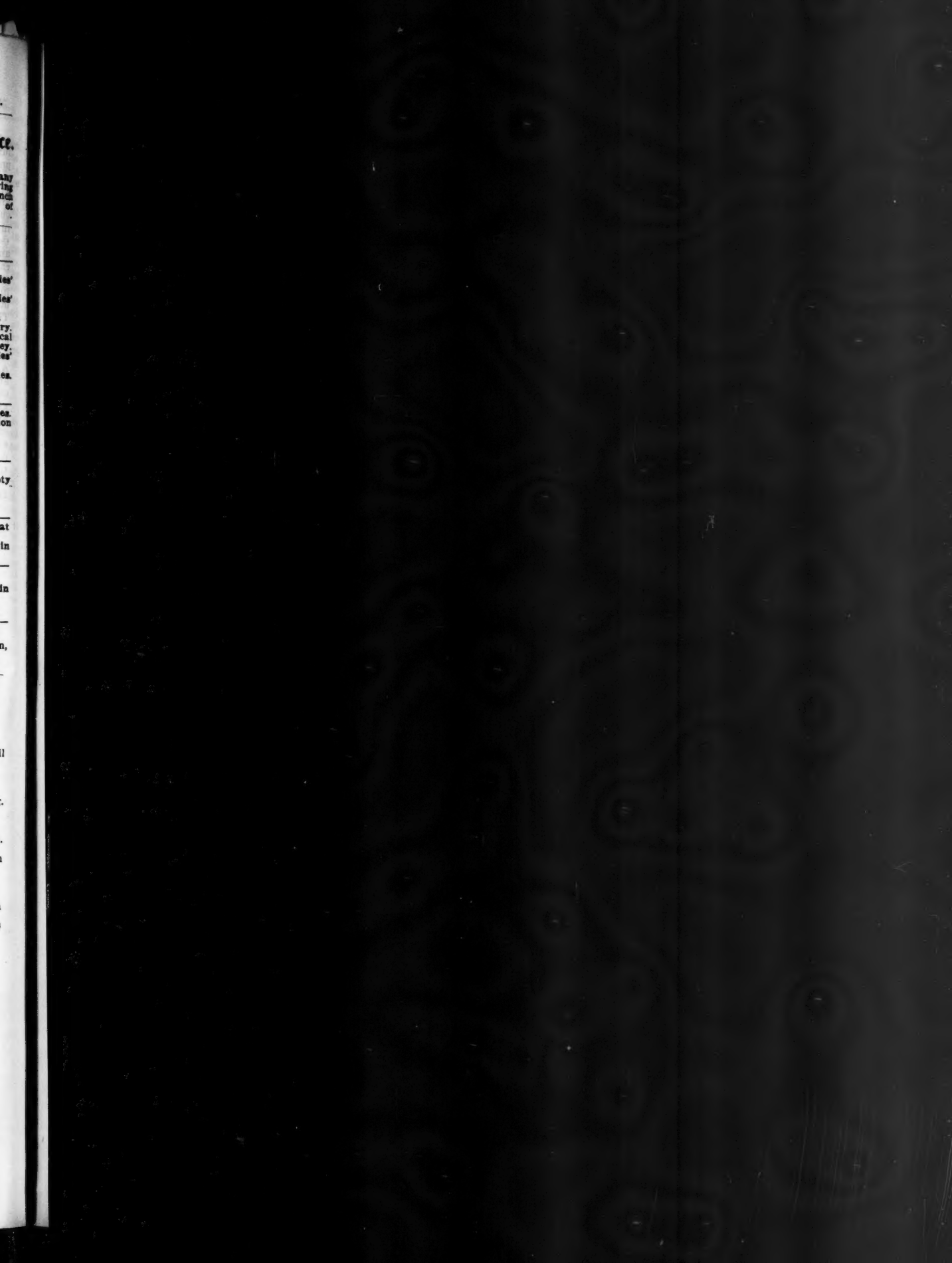
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